Basic topics of Digital RF Communications

Course Description

This course is added for students who are interested in Digital Communications.

Students learn the main parameters and specifications of digital communications links.

Training Duration: 1 day

Who Should Attend? – People who work nearby RF systems or people who intend to manage projects which include RF parts.

Prerequisites:

Previous knowledge is needed. Students should have some knowledge in Physics, Mathematics and Communication technics.

Course Outline:

1. **Introduction**
   - 1.1. General
   - 1.2. The Communication Link
   - 1.3. Wireless Networks brief

2. **Some Digital Communications Theory Topics**
   - 2.1. Channel Capacity and Entropy
   - 2.2. Additive White Gaussian Noise (AWGN)
   - 2.3. Encoding and Decoding
   - 2.4. Karnaugh Map
   - 2.5. Forward Error Correction (FEC) codes & Bit Error Rate (BER)
   - 2.6. Automatic Repeat Query / Request (ARQ)
   - 2.7. Interleaving and De-interleaving
   - 2.8. The Likelihood Ratio (LR) Principal

3. **Summary**